

## CSCE1102 Assignment 02 - Chicken Invaders

### Description

The original Chicken Invaders game was published on July 24, 1999, and it is the first in the franchise. The player controls a single spacecraft by sliding it horizontally across the bottom of the screen and firing at swarms of invading extraterrestrial chickens in this fixed shooter game.

Take the fate of the world into your own hands (or at least enjoy an omelet) in this modern version of the '90s classic.

Save the world today!



### What are we building

In the last section, we started creating a simple shooting game but with no graphics or sound effects so what's the fun in that!?.

In this assignment we will convert it to the chicken invaders game.

*The output from last section should be a rectangle displayed on the screen and responsive to up, down, left and right keys on the keyboard. In addition, when the space key pressed a bullet will be emitted from the rectangular shape. Also a continuous spawning of chicken from the top of the screen from random positions. Whenever the bullet touches the enemy, the enemy is destroyed.*

#### STEP#1 : Adding the spaceship and the chickens

Rather than a rectangle, add the image "ship.png" so that the player can move this ship around. These enemies will be represented by the image "chicken.png".

*TIPS: the player class must inherit from the QGraphicsPixmapItem class and the change will happen in the constructor of the player class.*

*The change will occur in the constructor, rather than using the function setRect(), use*

*setPixmap(QPixmap("The\_path\_of\_the\_image"));*

*If the image is too big you can scale is:*

*setPixmap(QPixmap("The\_path\_of\_the\_image").scaled(height, width));*

#### STEP#2 : Let's shoot laser:

The laser will be represented by the image "red\_laser.png" that will be emitted from the spaceship whenever the space bar is pressed. Since the bullet will be represented by an image as well, it will inherit from QGraphicsPixmapItem.

STEP#3: Health and score

You should have a function that will decrease the health value that is initially set to 3, whenever the enemy will bypass the spacecraft. Create a function called “decrease()”, that will decrease the score by one and display it on the screen with a red colour. In the same function, you need to check the health value if it is less than 1, the player lose and display a game over message and the score that the player reached.

The same goes for the score, there will be a function that will increase its value whenever the bullet hits the enemy. Create a function called “increase ()” That will increase the score by one and the display it on the screen by a blue colour.

TIPS: 1. How to display a text message in QT:

```
setPlainText(QString("The message "you want to display") +
               QString::number(The_name_of_the_variable));
```

2. You either create a class for the heart and score or you create in the player class
3. Use QMessageBox to display the message.

```
msg = new QMessageBox; //This is how you create a message box.
your can then use the function: setText(), setTitle() to set the text of the
message box with the score and the title of the window however you want.
```

BONUS STEP:

*You are required to add sound when the bullet is emitted and when the chicken is destroyed.*